Algebra II Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 8 Test Review Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_\_\_\_\_\_

I. Exponential, Linear and Quadratic Functions

**Identify if the function is exponential, linear, or quadratic.**

|  |  |
| --- | --- |
|  |  |
|  |  |

II. Transformation Properties of Exponential Functions

|  |
| --- |
| 1. Write the function that represents the transformation of *f* reflected over the   y-axis, vertically compressed by a factor of 3 units, and shifted 7 units to the left. |
| 1. Describe the transformation from *f(x)* to *g(x)*. |
| 1. Write the function that represents the transformation of *f* vertically compressed by a factor of 2 units, shifted 2 units to the right, and shifted 4 units down. |

III. Compound Interest

What is the Compound Interest Formula? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |
| --- |
| 1. One hundred dollars is invested at 2% interest compounded quarterly. Determine how much the investment is worth after 3 year. **Round to the nearest hundredth.** |
| 1. Three hundred dollars is invested at 4% interest compounded daily. Determine how much the investment is worth after 2 years. **Round to the nearest hundredth.** |
| 1. One hundred and fifty thousand dollars is invested at 9.2% interest compounded annually. Determine how much the investment is worth after 11 years. **Round to the nearest hundredth.** |
| 1. Eleven dollars is invested at 13% interest compounded annually. Determine how much the investment is worth after 35 years. **Round to the nearest hundredth.** |
| 1. How much will a $597 investment be worth after 90 years if it is invested at 6.8% interest compounded annually? **Round to the nearest hundredth.** |

IV. Logarithmic and Exponential Functions

**Rewrite each equation in exponential form.**

|  |  |
| --- | --- |
| 13) | 14) |
| 15) | 16) |

**Rewrite each equation in logarithmic form.**

|  |  |
| --- | --- |
| 17) | 18) |
| 19) | 20) |

V. Properties of Logarithms

**Express the logarithm in expanded form.**

|  |  |
| --- | --- |
| 21) | 22) |

**Express as a single logarithm.**

|  |  |
| --- | --- |
| 23) | 24) |

**Simplify.**

|  |  |  |
| --- | --- | --- |
| 25) | 26) | 27) |

VI. Change of Base Formula

**Solve for x. Round to the nearest hundredth.**

|  |  |  |
| --- | --- | --- |
| 28) | 29) | 30) |